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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-------------------------|-------------------------------------|------------------------|
| 10/589,519 | 05/08/2007 | Randall Allen Engelland | 00758.1680USWO | 7062 |
| 23552 7590 06/02/2009 MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903 | | | EXAMINER CLEMENTE, ROBERT ARTHUR | |
| | | | ART UNIT 1797 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|---|--|
| Office Action Summary | Application No. 10/589,519 | Applicant(s) ENGELLAND ET AL. | |
| | Examiner ROBERT A. CLEMENTE | Art Unit 1797 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7 and 8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>20060815</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,585,792 to Schneider et al. in view of US Patent No. 5,820,646 to Gillingham et al.

Schneider teaches a filter element (50), or filter cartridge arrangement, as shown in figure 3. The filter element includes a frame (52) with opposite side edges (58, 58'). The side edges (58, 58') can be considered to form a sidewall arrangement with first and second opposite sides. A filtration media (55) is secured in the frame, such as by using the potting media (59) as shown in figure 4. Thus, the media (55) is secured to the sidewall arrangement. As discussed in column 4 line 66 - column 5 line 14, the filter element (55) is shown as a three-dimensional rectangle, but can have various shapes.

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This shape will have three axes of symmetry, including one that is parallel to the sides (58, 58'). The pegs (60) form first and second projections on a first side (58) and third and forth projections on a second side (58'). The pegs (60), or projections, on the same side can be considered to be spaced axially and vertically from each other, as the filter element inherently can be positioned so the sides (58, 58') are vertical and there is an axis that parallels the spacing of the pegs (60). Although Schneider discloses in column 6 lines 35 - 45 that any number of media types can be used as the air filter media (55) in the filter element (50), Schneider does not disclose using z-filter media comprising fluted media secured to facing media. Gillingham teaches a fluted filter media (22), or z-filter media, as shown in figure 1. The fluted filter media (22) includes a fluted media sheet (30) secured to a facing media sheet (32). Figure 4 shows a generally three-dimensional rectangle filter element (50) made from layers of the fluted filter media. Figure 5 shows a filter element (52) made by winding a single faced filter media (48). One of ordinary skill in the art would reasonably expect a large variety of shapes can be formed by either winding or stacking the filter media. Figure 11, shows the block filter element (50) includes in a surrounding housing (102) that includes opposite sides. As disclosed in column 3 lines 1 - 19, the filter media of Gillingham is self-supporting, provides a large filter area per volume, and decreases flow restrictions and pressure drop across the filter.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schneider to include a fluted z-filter media in the filter element (50)

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as suggested by Gillingham in order to provide a self-supporting filter media with large filter area per volume that can easily be arranged into the desired shape needed.

In regard to claim 8, as shown in figure 3 and discussed in column 5 lines 47 - 50, the pegs (60), or projections, in Schneider preferably are cylindrical with a circular cross-section.

Allowable Subject Matter

4. Claims 1 - 6 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter:

The examiner did not find any prior art that taught or suggested an air cleaner arrangement including: a housing having an inlet end and an opposite outlet end; the housing sidewall including an access cover removable from a remainder of the housing; a filter cartridge comprising: a z-filter media construction comprising media formed from a fluted sheet secured to a facing sheet; and, defining opposite inlet and outlet flow ends; a filter cartridge sidewall construction surrounding the z-filter media construction, and having first and second, opposite, sides; a seal arrangement comprising a rubber like member mounted on the filter cartridge for sealing with the housing; a first projection arrangement extending outwardly from the first side of the filter construction sidewall construction; and, a second projection extending outwardly from the second side of the filter cartridge sidewall; and, first and second biasing and lock blades secured to the access cover and projecting along opposite sides of the filter cartridge;

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the first biasing and lock blade having a non-straight, contoured, forward edge in engagement with the first projection arrangement; and, the second biasing and lock blade having a non-straight, contoured, forward edge in engagement with the second projection arrangement; the forward edges of the biasing and lock blades engaging the filter cartridge to secure the filter cartridge in a sealing orientation.

As discussed above, the combination of Schneider and Gillingham provides a similar filter element, or cartridge. Schneider forms the primary reference and discloses an air cleaner arrangement (10) for housing the filter element. The air cleaner arrangement includes an access cover (30); however, there is no teaching or suggestion for including biasing and lock blades on the access cover.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Other prior art references listed on the PTO-892 (Notice of References Cited) are considered to be of interest disclosing similar air cleaners and filter elements.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT A. CLEMENTE whose telephone number is (571)272-1476. The examiner can normally be reached on M-F, 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RAC

/DUANE SMITH/
Supervisory Patent Examiner, Art Unit 1797